River Authority Dam Information

(per Water Code 12.053)

TX#	Dam Name	Latitude	Longitude	Operator	Operation & Maintenance/Rehab Schedule	O&M Cost	Method of Finance	Notes
TX04388	LAKE FORK DAM	32.802896	-95.540905	Sabine River Authority	**Daily (7-days per week):** • Each morning conduct a vehicular drive-by visual observation of the entire dam embankment and spillway structure • Each morning record daily field parameters including: reservoir elevation, temperature, evaporation, precipitation, and instantaneous releases. • Inspect Tainter gates for any accumulated debris • Inspect security access gates ensuring they are locked **Weekly:** • Conduct a visual observation of the entire dam embankment and spillway structure using side-by-side • Exercise spillway backup generator to ensure functionality • Visual walkthrough inspection of spillway gallery • Visual upstream and downstream inspection of Tainter gates • Visual inspection of tailrace channel immediately below dam • Visual inspection of buoy line upstream of spillway • Visual inspection of embankment dam roadway • Exercise spillway gallery exhaust fan to ensure functionality • Inspect structure lighting for functionality **Monthly:** • Conduct a visual observation of the entire dam and embankment spillway structure using side-by-side with multiple passes along toe of embankment, top of embankment along downstream, and top of embankment along upstream. • Exercise all Tainter gates up to 1-ft • Exercise release siren to ensure functionality • Exercise wetwell gates • Exercise two 36-inch and one 10-inch valves • Piezometers and drain pipes are read, recorded on a spreadsheet, graphed and e-mailed to outside consulting engineer. • Exercise gallery sump pump to ensure functionality **Annually** • Conduct an annual inspection with outside consulting engineer and Authority staff. Subsequent report includes completion of TCEQ Dam Inspection Form along with photo documentation for future reference. Based on inspection, written recommendations or changes regarding maintenance items are prepared for implementation. • Every third year a more in-depth triennial inspection is conducted of the project including a thorough inspection of the upstream side of the dam by watercraft as well as a thorough inspection of all five Tainter gates. • The project Emergency Action Plan (EAP) is updated and distributed as needed. • Grease Tainter gate trunions • Downstream earthen embankment is fertilized in the spring as ground conditions and weather conditions permit • Conduct annual dam alignment survey • Measure and record Tainter gate motor amperage readings • Inspect all Tainter gate gear box fluid levels and change as needed • Sound relief wells **As Needed:** • Routine mowing; schedule dependent on weather and growing conditions • Herbicide upstream soil cement • Apply herbicide to undesirable vegetation along embankment, fence rows, and other areas • Conduct upstream soil cement repairs • Re-work or add to riprap adjacent to embankment • Eradicate burrowing animals and fill in holes • Repair identified surface erosion and tractor ruts along embankment slopes • Upstream and downstream side full inspection of Tainter gates using stop logs to dewater including full range of motion operation (typically once every 3-5 years) • Fertilize/lime embankment vegetation • Obtain soil samples to determine fertilizer requirements • Conduct lag testing of piezometers (as specified by consulting engineer) • Seal coat dam roadway surface • Spray insecticide along embankment vegetation • Remove debris washed along embankment • Maintain bouys and signage along embankement • Repair/replace security fencing as needed • Clean and repaint structure piping, valves, and other metal structures • Repair erosion, spalling and cracks in concrete surfaces	$10,909,000	Water sales	

River Authority Dam Information

(per Water Code 12.053)

TX#	Dam Name	Latitude	Longitude	Operator	Operation & Maintenance/Rehab Schedule	O&M Cost	Method of Finance	Notes
TX00491	IRON BRIDGE DAM	32.808272	-95.920441	Sabine River Authority	**Daily (7-days per week):** • Each morning conduct a vehicular drive-by visual observation of the entire dam embankment and spillway structure • Each morning record daily field parameters including: reservoir elevation, temperature, evaporation, precipitation, and instantaneous releases. • Inspect security access gates ensuring they are locked **Weekly:** • Conduct a visual observation of the entire dam embankment and spillway structure using side-by-side • Exercise spillway backup generator to ensure functionality • Visual walkthrough inspection of spillway gallery • Visual inspection of tailrace channel immediately below dam • Visual inspection of buoy line upstream of spillway • Visual inspection of embankment dam roadway • Exercise spillway gallery exhaust fan to ensure functionality • Inspect structure lighting for functionality **Monthly:** • Conduct a visual observation of the entire dam and embankment spillway structure using side-by-side with multiple passes along toe of embankment, top of embankment along downstream, and top of embankment along upstream. • Exercise wetwell gates • Exercise one 20-inch valve • Piezometers and drain pipes are read, recorded on a spreadsheet, graphed and e-mailed to outside consulting engineer. • Spillway extensometer data downloaded, recorded on a spreadsheet, graphed and e-mailed to outside consulting engineer. Additionally, micrometer readings are conducted and forward to consulting engineer. • Exercise spillway tunnel sump pump to ensure functionality **Annually** • Conduct an annual inspection with outside consulting engineer and Authority staff. Subsequent report includes completion of TCEQ Dam Inspection Form along with photo documentation for future reference. Based on inspection, written recommendations or changes regarding maintenance items are prepared for implementation. • Every third year a more in-depth triennial inspection is conducted of the project including a thorough inspection of the upstream side of the dam by watercraft. • The project Emergency Action Plan (EAP) is updated and distributed as needed. • Downstream earthen embankment is fertilized in the spring as ground conditions and weather conditions permit • Conduct annual dam alignment survey. • Sound relief wells • Replace batteries in data logging equipment **As Needed:** • Routine mowing; schedule dependent on weather and growing conditions • Apply herbicide to undesirable vegetation along embankment, fence rows, and other areas • Re-work or add to riprap along embankment • Eradicate burrowing animals and fill in holes • Repair identified surface erosion and tractor ruts along embankment slopes • Fertilize/lime embankment vegetation • Obtain soil samples to determine fertilizer requirements • Conduct lag testing of piezometers (as specified by consulting engineer) • Seal coat dam roadway surface • Spray insecticide along embankment vegetation • Remove debris washed along embankment • Maintain bouys and signage along embankement • Repair/replace security fencing as needed • Clean and repaint structure piping, valves, and other metal structures • Repair erosion, spalling and cracks in concrete surfaces	$14,529,000	Water sales	

River Authority Dam Information

(per Water Code 12.053)

TX#	Dam Name	Latitude	Longitude	Operator	Operation & Maintenance/Rehab Schedule	O&M Cost	Method of Finance	Notes
LA00030	TOLEDO BEND DAM	31.19707	-93.572363	Sabine River Authority & Sabine River Authority, State of Louisiana	**Daily (7-days per week):** • Each morning conduct a vehicular drive-by visual observation of the entire dam embankment and spillway structure • Each morning record daily field parameters including: reservoir elevation, temperature, evaporation, precipitation, and instantaneous releases. • Inspect Tainter gates for any accumulated debris • Inspect security access gates ensuring they are locked **Weekly:** • Conduct a visual observation of the entire dam embankment and spillway structure using side-by-side • Exercise spillway backup generator to ensure functionality • Visual walkthrough inspection of spillway gallery • Visual upsteram and downstream inspection of Tainter gates • Visual inspection of tailrace channel immediately below dam • Visual inspection of buoy line upstream of spillway • Visual inspection of embankment dam roadway • Exercise spillway gallery exhaust fan to ensure functionality • Inspect structure lighting for functionality **Monthly:** • Conduct a visual observation of the entire dam and embankment spillway structure using side-by-side with multiple passes along toe of embankment, top of embankment along downstream, and top of embankment along upstream. • Exercise all Tainter gates up to 1-ft • Exercise release siren to ensure functionality • Measure and record flows in embankment toe ditches • Piezometers and drain pipes are read, recorded on a spreadsheet, graphed and e-mailed to outside consulting engineer. • Inspect gallery sump pumps to ensure funtionality **Annually** • Conduct an annual inspection with Staff from Federal Energy Regulatory Commission (FERC), outside consulting engineer and Authority staff. Based on inspection, written recommendations, further evaluations, or changes regarding maintenance items are prepared for implementation. • Every fifth year a more extensive comprehensive Part 12d Dam Safety Inspectionis conducted per FERC requirements • Every fifth year prepare and submit to FERC a new Dam Safety Surveillance Monitoring Plan (DSSMP) to FERC • Annually submit Dam Safety Surveillance Monitoring Report (DSSMR) to FERC • The project Emergency Action Plan (EAP) is exercised, updated and distributed. When required by FERC, conduct a Functional Exercise of the EAP. • Grease Tainter gate trunions • Downstream earthen embankment is fertilized in the spring as ground conditions and weather conditions permit • Conduct annual dam alignment survey • Measure and record Tainter gate motor amperage readings and megger test results and forward to FERC • Inspect all Tainter gate gear box fluid levels and change as needed • Sound relief wells • Prepare and issue to employees Board adopted Owners Dam Safety Program (ODSP) Philosophy letter • Inspect underwater end seals upstream and downstream of powerhouse and spillway with divers • Local fire department inspection of hydro-electric powerhouse • Every six months, read inclinometers and forward readings to consulting engineer for inclusion into DSSMR • Every three months, inspect and report relief well operation to consulting engineer **As Needed:** • Routine mowing; schedule dependent on weather and growing conditions • Herbicide upstream soil cement • Apply herbicide to undesirable vegetation along embankment, fence rows, and other areas • Conduct upstream soil cement repairs • Re-work or add to riprap adjacent to embankment • Eradicate burrowing animals and fill in holes • Repair identified surface erosion and tractor ruts along embankment slopes • Upstream and downstream side full inspection of Tainter gates using stop logs to dewater including full range of motion operation (typically once every 3-5 years) • Fertilize/lime embankment vegetation • Obtain soil samples to determine fertilizer requirements • Conduct lag testing of piezometers (as specified by consulting engineer) • Repair dam roadway surface • Spray insecticide along embankment vegetation • Remove debris washed along embankment • Maintain bouys and signage along embankement • Repair/replace security fencing as needed • Clean and repaint structure piping, valves, and other metal structures • Repair erosion, spalling and cracks in concrete surfaces • Pump out manholes and clean out drains under spillway apron	$11,550,384	Water & Hydro-electric sales	